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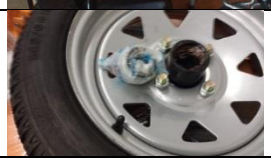
Range Road RR27T
Firewood Processor

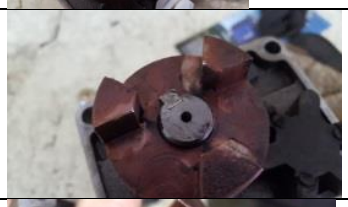
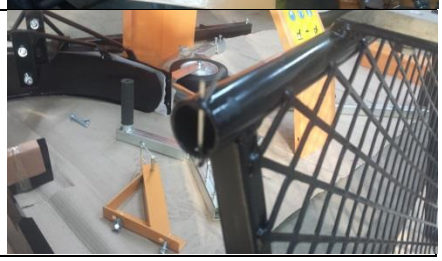
Crated Unit
Assembly Manual

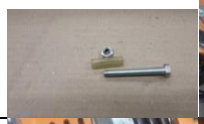
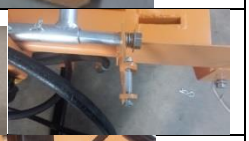
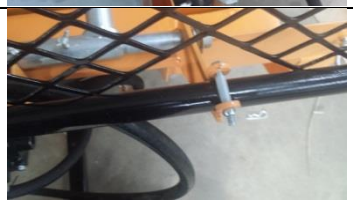
Crated Unit	
1.) Undo 8 -18mm x 19mm Nuts and bolts , 2 on each leg of top frame	
2.) Lift top of Metal crate off and move out of work area.	
3.) Remove Shrinkwrap.	
4.) Unwrap Wheels	
5.) Remove bag containing Bearing, washer, nut, cotter key and cap, place on workbench, set unwrapped wheels out of the way.	
6.) Unwrap the following, place on workbench	
sawdust chute	

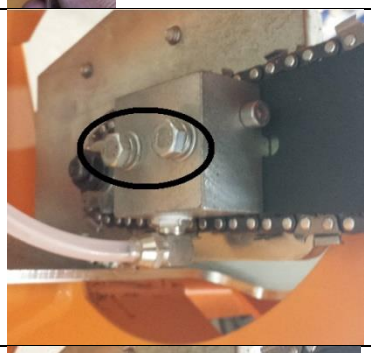
sawbar engagement arm and extension	
toolbox	
fenders (2)	
bar oil container, do not misplace the loose hose	
towbar jack	
Log roller Arm	
Towbar	
Splitter Wedge, Axle	
Chainsaw Bar Cover, Safety Cages (2), Hydraulics Cover	
The Processor should now be sitting on the crate with all loose pieces removed	

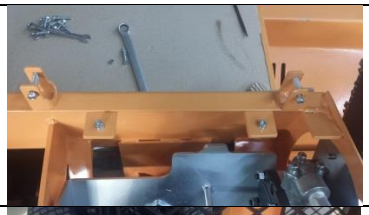
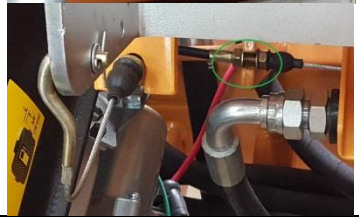
7.) Lift processor off crate with forklift, crane or jacks, make sure that straps will not catch anything on unit when tightened and that unit will be balanced. **Lift high enough to be able to install Axle, Wheels and Tripod**	
8.) Remove lower crate from work area	
9.) Install Tripod leg at front of processor	
10.) Loosen Axle retention Bolts and lock nuts (18mm x 18mm)	
11.) Slide Axle through tube, make sure the bolt holes face upwards, centre the axle in the housing, tighten bolt, tighten lock nut, repeat on opposite side	
	
12.) Grease all 4 wheel bearings, use a flat screwdriver to remove dust seals from hubs and remove inner wheel bearings for greasing	
13.) Install Wheel on axle	

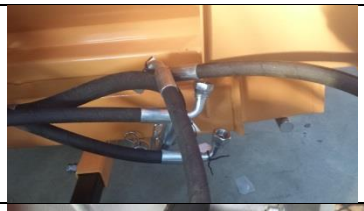
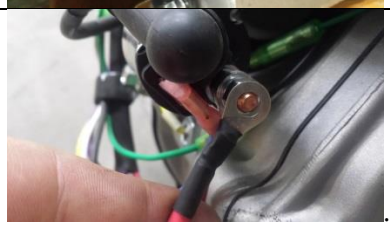
14.) Install Bearing, then washer	
15.) Screw on Castle Nut make sure to line threads up	
16.) Tighten castle nut until nut is snug and wheel is hard to turn, then back the nut off ¼ turn until cotter pin hole lines up	
17.) Insert cotter pin and bend	
18.) Install hub cap, use a rubber mallet to press into place	
19.) Grease wheel hub generously through grease zerk on back of hub	
Repeat on opposite side	
20.) The four lug nuts of each wheel should be torque to 90ft-lbs.	
Lower unit to floor	
Assembler must check that the engine and hydraulic couplers are secure and spaced properly	

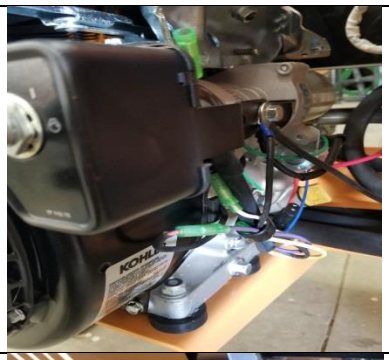
21.) Main pump should be removed to check this.	
Ensure that Lovejoy rubber is not damaged	
If the crankshaft or hydraulic pump shaft sticks through the coupler to get the right fitment, make sure that the rubber is turned so the shaft fits into the hollow. Make sure that the keyway does not distort the rubber, if the keyway is protruding as pictured it will damage the rubber, it must be pushed down to be level with coupler edge	
You should not see the keyway above the coupler. As shown in the picture the keyway must be tapped down, flush with the coupler	
22.) Line the Lovejoy connectors up and trial fit the pump to the motor, adjust the lovejoys so that there is a small space in between the metal couplers (approximately 1/16")	
23.) Tighten the bolts holding the housing to the engine and recheck the spacing on the lovejoy	
24.) Install sawdust chute 10mm Nut x Bolt through body, nuts go in the sawdust collector side.	
25.) Remove cotter pin from bottom tube on large safety cover	

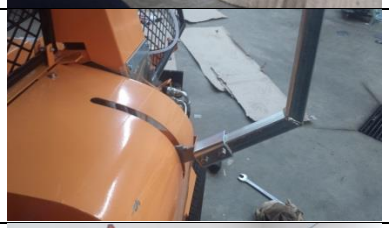
26.) Remove 8 – 10mm Nuts and bolts from edge of large safety cover.	
27.) Line up holes in edge of large safety cage with the holes in the side of the chainsaw cover	
28.)Install 8 – 10mm bolts and nuts, tighten	
29.) Install Bar Oil Tank onto back of chainsaw safety cover with 13mm nut	
30.) Remove 10mm bolt and nut from holder above splitting trough, keep plastic tube as well	 
31.) Put large safety cage cover into place, slide through hole in processor	
32.) Re-install 10mm Bolt, tubing and nut, snug up lock nut, do not tighten	
33.) Remove nut from bar lube fitting, insert hose over barb and snug up fitting (14mm)	

34.) Route hose through hole in cover to bar oil tank, remove nut, insert hose over barb and snug up fitting (14mm)	
	
35.) Remove nut from Bar Oil tank fitting, insert hose through nut and over barb, snug up nut over hose	
	
36.) The chain can now be adjusted to ensure the tension is set correctly. Proper chain tension is achieved when the chain can be pulled away from the bar by hand ¼"… ½". To tighten or loosen the chain, the two bolts can be loosened using a 12mm wrench. Next, the allen key bolt can be turned clockwise to tighten or counter…clockwise to loosen the chain. The two 12mm bolts can be tightened again to hold the bar securely.	
37.) Hook sawbar return spring into slot.	
38.) Apply grease liberally to the metal surfaces that touch below the spring, this will help them slide	

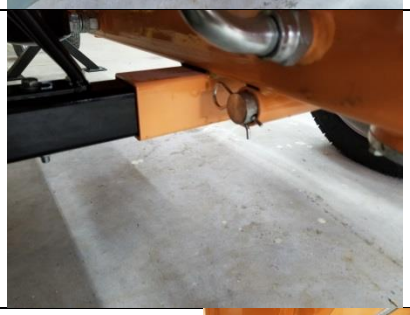
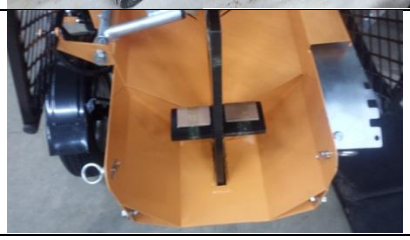
39.) Remove 2 10mm Nuts & Bolts and plastic tubing for small safety cover mount	
40.) Set small safety cage in place, re-install 10mm bolts nuts and tubing	
41.) Bolt roller travel mount to processor, 2 – 13mm bolts and nuts (mount may be in Toolbox)	
42.) Mount toolbox, 2 – 13mm bolts and nuts	
43.) Position & tighten chainsaw actuator tab so it will activate valve when moved, can adjust later if needed	
44.) Adjust bolt on swivel plate (in black circle) so that when the sawbar is pulled down the bolt head hits the body to stop the swivel plate, this will allow the chainsaw to cut through the log but stops it from going further and stretching the cable.	
45.) Adjust cable so that when the chainsaw bar is pulled down, the cable will activate the ram valve, to tight and the cable will stretch, to loose and the ram won't activate. The cable can be adjusted at both ends.	 

46.) Find the ends of the 4 Hydraulic hoses that are not hooked up	
47.) Connect hydraulic hose to saw motor, make sure hose is routed cleanly and not rubbing, connect marked Hoses to corresponding port, "A" to "A", "H" to "H",etc.(some Units will already have this connected	
Make sure all hoses are routed cleanly and will not rub	
48.) Undo 17mm nuts on engine mount bolts and apply Loctite, re-tighten	
49.) Remove 10mm nut, lockwasher and flatwasher from starter solenoid, Install loop from red wire onto stud of solenoid and re-install washer and nut, do not overtighten nut	 

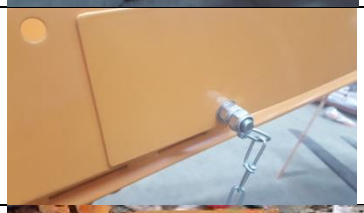
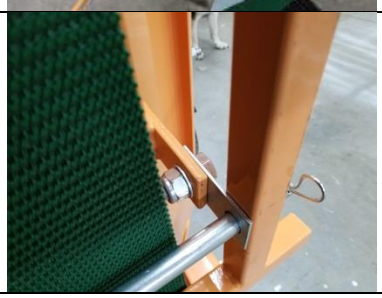
50.) Remove 10mm bolt from the engine ground point, put ring from black wire on bolt and re-install.	
51.) Tighten wires onto correct battery terminal (red +, Black-), install terminals on battery and snug up 10mm bolts	
52.) Remove 2 Allan head screws from tabs behind small safety cover	
53.) Remove 10mm Bolt & nut from side of sawdust collector	
	
54.) Remove 10mm Bolt & Nut from lower bracket by engine mount, flip bracket outwards 180° and re-install Bolt & Nut, do not tighten	
55.) Put Hydraulic cover in place (large Orange curved cover), Install 10mm Bolt & Nut in lower hole	

56.) Install 10mm Bolt & Nut in side of sawdust cover	
57.) Install 2 Allan head bolts ion top of cover, tighten all bolts	
58.) Remove 2 – 13mm Bolts & Nuts from chainsaw engagement arm extension	
59.) Attach extension to drawbar and tighten 13mm bolts	
60.) Remove 2 – 13mm Bolts, Nuts & Bracket from bottom of engagement arm	
61.) Put engagement arm in place, install bracket and 2 – 13mm Bolts & Nuts, Tighten	
Install Handle Extension if needed	
62.) Remove 16mm bolt x 17mm nut from drawbar	

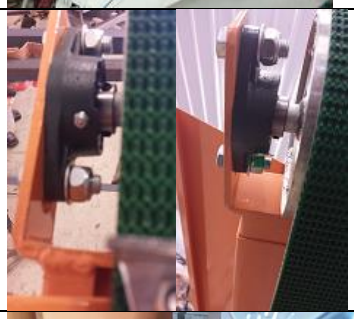
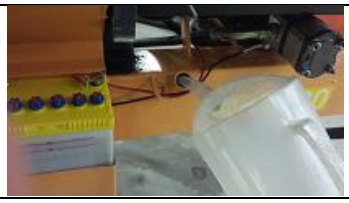
63.) Slide drawbar into tube on front of processor, Re-install and tighten 16mm bolt x 17mm nut, loosen 18mm nuts on 2 retainer bolts, tighten bolts against drawbar, then re-tighten nuts to lock into position	
64.) Remove 16mm bolts x 17mm nuts from drawbar	
65.)install jack and tighten bolts	
66.) Tighten bolts on drawbar coupler	
67.) Remove cotter pin from fixed position roller shaft on log roll arm, rollers are not marked so you may have to trial fit to see which roller is in the fixed position	
68.) Slide pin through both brackets and roller and re-install cotter pin.	
69.) Fold log roller arm into travel position and make sure travel safety pin slides into place, adjust mount position if necessary	
70.) Mount fenders using the 2 long 13mm bolts and nuts supplied with each fender, make sure that if the fender has signal light mounting holes they face to the rear	

repeat on opposite side	
71.) On some units the wedge adjustment lever needs to be installed by the assembler	
72.) Bolt the handle to the adjusting bar with the spring and nut in this position, do not tighten	
73.) Wedge adjustment bar swivel pin slides through tube behind the axle, install spring clip	
74.) With the handle engaged in the adjustment lock, snug up nut and bolt so that the handle is engaged with the lock plate but it can still be pulled out to change the wedge position	
75.) Install splitter wedge	

If unit was purchased without an outfeed conveyor connect unmarked loose hydraulic hose to open port on return Tee and tighten, then proceed to step #91. **If unit was purchased with an outfeed conveyor, DO NOT do this step**	
76.) Open conveyor box, remove shrinkwrap from conveyor, box includes Conveyor Top Section	
Lower Section, includes Hydraulic pump **Top and bottom sections may already be bolted together**	
Belt	
Top Roller	
77.) Pull conveyor leg out of holders and re-intall in top tube only, place lower conveyor in place and install 2 mount bolts, do not over tighten, conveyor must be able to swing up and down freely	
78.) Remove bolts at rear of processor body	
79.) Put conveyor in place and re-install bolts, tighten	

80.) Install belt, be careful when unwrapping so you don't lose the lacing pin. Mate the ends of the belt together to make sure as many laces overlap each other as possible, insert pin	
81.) Slide top roller into place	
82.) Pull belt into position	
83.) Install lower side extensions, lower end mounts with an allan head bolt x17mm nut, bolt on motor side is also used to secure chain for leg	
	
	
Upper end is secured with 13mm Bolts, spacers and nuts, the travel cable is also installed with theses bolts	
Some conveyors (with square leg) will have two silver plates that are used as spacers to hold the leg away from the belt when it is in the travel position	

	
84.) Hook up hydraulic hoses, one from processor to conveyor, 1 from conveyor to processor return tee	
85.) While supporting conveyor pull out safety pins and slowly lower unit, adjust leg until conveyor is at desired height, attach safety chain to catch at bottom of leg	
	
	
86.) Unfold conveyor so that it is full length, pull pin and engage locking clasp between upper and lower conveyor, re-insert pin	
87.) Engage conveyor lock between upper and lower conveyor sections	
88.) Remove travel cable from operator side of conveyor, let it hang out of the way on opposite side	

Check to make sure nuts are tight on cable clamps	
89.) Turn adjusting bolts until conveyor is snug, if belt is too loose drive pulley will spin without turning belt, if it is too tight a jammed piece of wood could tear belt	
90.) Grease conveyor bearings, 2 at top of conveyor, 1 at bottom	
91.) Check engine oil, top up or fill as necessary	
92.) Add bar oil	
93.) Flush hydraulic tank, pour 2-3 litres of hydraulic oil into tank, then unscrew drain plug on bottom of hydraulic tank and drain to flush out any contamination	
94.) Make sure all return hoses are run the cleanest way, so they won't rub or pull tight, you may have to swap Tee's or hose positions	
95.) Add 26L AW32 hydraulic oil, in cold climates AW22 can be used and in hot conditions AW46 can be used	
96.) Check all bolts, hoses and fittings, including engine mount bolts to make sure nothing is loose	
97.) Add fuel to engine fuel tank, do not fill above red level marker in tank neck, the tank vents through the cap, if fuel is above this line engine will not run very well and will stall. Premium fuel is recommended, Farm Fuel	

should not be used	
98.) Check adjustment of chainsaw chain, remember this is a chainsaw so the chain should not be tight, the bottom should hang off the bar slightly	
99.) Adjust safety cage hydraulic bypass valve, when the cage is closed this valve must be completely depressed	
100.) Make sure that manual ram engagement bar is in up position, Start engine and let idle until engine and hydraulic oil are at operating temperature	
101.) While engine is warming up, adjust conveyor belt to run in center of upper and lower pulleys, upper puller has bolts on either side for adjustment	
Lower pulley only has adjustment bolts on side opposite of drive motor	
When adjusted properly belt rides in center of lower pulley	
102.) When unit is up to operating temperature operate saw and ram multiple times to make sure they are adjusted and working properly	
103.) Shut unit off	
104.) Check all nuts, bolts, hose and fittings one more time, check for leaks	

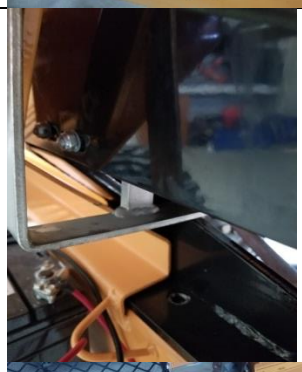
Ram Hood Adjustment

The 2 brackets on the ram hood must be checked for adjustment to make sure the ram does not extend to far and that when it returns it does not have a hard hitting stop.

The rear bracket hits the manual ram bar as the rams goes out, it needs to be adjusted so that it hits the return bar before the ram is fully extended.

Optional: If the customer is only cutting and splitting shorter lengths, the bar can be reversed to shorten the stroke and reduce the cycle time

The front bracket hits the post on the manual return arm as the ram returns home, this must hit the post before the ram hits its internal stops, softening the stop.
This should be adjusted so that the ram hood does not stick out into the splitting valley when it is in the home position, it should not be sunk into the housing, it should sit almost flush will the front wall.



Range Road Equipment (Except Pellet Machines & Hammer Mills)

This equipment comes with a 12 month warranty against Manufacturer's defects and excludes wear parts. If any product or part is proved to be defective within 12 months from date of purchase, by reason of improper workmanship and/or material we will replace, or repair at Range Road Enterprises Ltd. discretion, that part or product at no charge to you, excluding any freight costs. Pellet Makers & Hammer Mills come with a 6 month warranty against Manufacturer's defects and excludes wear parts.

Items not covered:
Wear parts –including Saw Bar, Saw Chain, Drive Sprocket, Lovejoy Coupling & Rubbers, Tires, Bearings, Etc. (Conveyor Belt – does not include rips or tears)

The engine is warranted separately by the engine manufacturer (Honda, Lifan, Kohler, Princess Auto, Ducar, Etc.)

The warranty begins on the date of sale and is warranted by Range Road Enterprises Ltd. to the original purchaser only. This Warranty does not cover items that have been damaged by accident, alteration, abuse or improper lubrication.

If the equipment is used commercially (Over 50 cords of firewood per year for processor) or a rental, warranty for this product is limited to a period of 90 days from the date of purchase.

Warranty cancellation
Unauthorized modification voids the warranty, Including but not limited to, welding, engine modification, pump and hydraulic system modification. The warranty is void if the user violates the assembly and/or operating & maintenance instructions.

Range Road Enterprises Ltd. shall not be liable under any circumstances for any incidental or consequential damages or expenses of any kind, including but not limited to – the cost of equipment rental, loss of profits, or cost of hiring services to perform tasks normally performed by the equipment.

Range Road Enterprises Ltd. obligation under this warranty shall be exclusively limited to repairing or replacing (at Range Road Enterprises Ltd. discretion) products which are determined by Range Road Enterprises Ltd. to be defective upon delivery F.O.B. (return freight paid by customer) Range Road Enterprises Ltd., and on inspection by Range Road Enterprises Ltd.. This warranty does not apply to defects due, directly or indirectly, to misuse, abuse, negligence, accidents, unauthorized repairs, alterations, lack of maintenance, acts of nature, or items that would normally be consumed or require replacement due to normal wear. In no event shall Range Road be liable for death, personal or property injury, or damages arising from the use of its products. Range Road Enterprises Ltd. does not issue credits or refunds on products purchased directly from a distributor or dealer.